

WHAT CLAIMED IS:

1. An erasing method for a p-channel nitride read only memory, wherein the p-channel nitride read only memory has a control gate, a drain and a source, and formed in a n-well, the erasing method comprising:

5 applying a positive voltage to the control gate and a negative voltage to the drain;
floating the source; and
grounding the n-well.

2. The erasing method of claim 1, wherein a voltage difference between the positive voltage applied to the control gate and the negative voltage to the drain is
10 sufficient to trigger a band-to-band induced hot electron injection to erase the p-channel nitride read only memory.

3. The erasing method of claim 1, wherein the voltage difference is not sufficient to open a channel of the p-channel nitride read only memory.

4. An erasing method for a p-channel nitride read only memory, wherein the p-
15 channel nitride read only memory has a control gate, a drain and a source, and formed in a n-well, the erasing method comprising:

applying a first voltage to the control gate and a second voltage to the drain;

applying a third and a fourth voltages to the source and the n-well respectively,
wherein a voltage difference between the first voltage the second voltage is sufficient to
20 trigger a band-to-band induced hot electron injection to erase the p-channel nitride read only memory.

5. The erasing method of claim 4, wherein the first voltage is a positive voltage.

6. The erasing method of claim 4, wherein the second voltage is a negative voltage.

7. The erasing method of claim 4, wherein the third voltage is to float the source.

8. The erasing method of claim 4, wherein the fourth voltage is a ground voltage.
9. The erasing method of claim 4, wherein the voltage difference is not opened a channel of the p-channel nitride read only memory.